

AMENDMENT TO CLAIMS:

Please amend the Claims as follows with additions shown in underline and deletions shown as strikeouts.

c/ 1. (CANCELLED)

2. (PREVIOUSLY PRESENTED) Disc speed control device according to claim 5, wherein the signal processing means comprises a data phase locked loop means which outputs a voltage corresponding to a phase locked loop frequency of a rate at which the data is read by the pick-up, and a reference voltage source which delivers a reference voltage at an input of the speed processor.

3. (CANCELLED)

4. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 12, wherein the signal processor comprises a data phase locked loop which outputs a voltage corresponding to a phase locked loop frequency of a rate at which the data is read by the pick-up, and a reference voltage source which delivers a reference voltage at an input of the speed processor.

Please add the following new claims:

5. (CURRENTLY AMENDED) Disc speed control device for use in a player or

Cl
cmx
recorder of a disc shaped information carrier to read or record data along data tracks,
the data being read or recorded using a pick-up, the device comprising:

disc actuating means for rotating the disc in a first mode at a constant linear velocity or a second mode at a constant angular velocity;

the pick-up for reading the data from the rotating disc and producing an output signal representative of scanned data from the rotating disc;

frequency generating means for generating a rotation speed frequency representative of a rotation speed of the rotating disc;

signal processing means for processing the output signal of the pick-up and creating a data frequency signal, the data frequency signal being related to a frequency at which the data is scanned by the pick-up;

a single speed processor including a single speed processing means for receiving the data frequency signal and computing a determined rotation speed value for said first mode and said second mode wherein in the first mode the determined rotation speed value further depends on a location of the rotating disc at which the pick-up scans the data; and

single speed servo means including a single speed comparator for receiving and comparing the rotation speed frequency signal and the determined rotation speed value and for regulating the disc actuating means in response to the determined rotation speed value.

6. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or~~

reorder according to claim 5, wherein:

the speed servo means which receives the determined rotation speed value, the disc actuating means and the frequency generating means form a first loop; and

further comprising:

a second loop which provides the determined rotation speed value to an input of the first loop and which provides processing of the data frequency signal in the first mode.

7. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 6, wherein the second loop processes:

a constant speed value wherein the speed processor outputs a constant value for the determined rotation speed value which may occur in a start phase when the disc is inserted in the player or the recorder, or in the second mode when the player or the recorder is used as a CD-ROM drive.

8. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 7, wherein the second loop further freezes an instantaneous speed in the event of error wherein the speed processor registers an absence of the data frequency signal and outputs the determined rotation speed value which was stored previous to the occurrence of the error to control the disc actuating means until the pick-up scans readable data and the data frequency signal is generated again.

Cl
conf

9. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 8, wherein the second loop further generates a speed profile in case of jumps or smooth acceleration when the data is read in the first mode and the pick-up is moved towards a periphery of the disc in a so-called jump, thus, the speed processor anticipates a final rotation velocity required to read the data on an accessed track and outputs the final rotation velocity as the determined rotation speed value to the first loop during the jump while no data is read.

10. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 9, wherein:

the speed servo means generates a smooth acceleration of the determined rotation speed value by successively outputting increasing speed values to the first loop so that when the disc rotates at higher speeds, the data may be read at a higher rate.

11. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 6, wherein the second loop comprises:

a data phase locked loop which receives the output signal from the pick-up, the data phase locked loop comprising:

means for generating a voltage depending on a frequency of a read data rate which is defined as a phase locked loop frequency,

Cl, x
Cm
a voltage curve having a correspondence between phase locked loop frequencies and said voltage, and

an output of said voltage according to said voltage curve; and

said speed processor which receives at its input said output by the data phase locked loop and a reference voltage both of which are compared and, depending on a result of the comparison, outputs a higher or smaller determined rotation speed value.

12. (CURRENTLY AMENDED) Disc speed control device for use in a player or recorder of a disc shaped information carrier to read or record data along data tracks, the data being read or recorded using a pick-up, the device comprising:

disc actuator which rotates the disc in a first mode at a constant linear velocity or a second mode at a constant angular velocity;

the pick-up which reads the data from the rotating disc and produces an output signal representative of scanned data from the rotating disc;

frequency generator which generates a rotation speed frequency representative of a rotation speed of the rotating disc;

signal processor which processes the output signal of the pick-up and creates a data frequency signal, the data frequency signal being related to a frequency at which the data is scanned by the pick-up;

single speed processor including a single speed processing means which receives the data frequency signal and computes a determined rotation speed value for said first mode and said second mode wherein in the first mode the determined rotation

Cl
Cm
x
speed value further depends on a location of the rotating disc at which the pick-up scans the data; and

single speed servo including a single speed comparator which receives and compares the rotation speed frequency signal and the determined rotation speed value and which regulates the disc actuating means in response to the determined rotation speed value.

13. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 12, wherein:

the speed servo which receives the determined rotation speed value, the disc actuator and the frequency generator form a first loop; and

further comprising:

a second loop which provides the determined rotation speed value to an input of the first loop and which provides processing of the data frequency signal in the first mode.

14. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 13, wherein the second loop processes:

a constant speed value wherein the speed processor outputs a constant value for the determined rotation speed value ~~which may occur~~ in a start phase when the disc is inserted in the player or the recorder, or in the second mode when the player or the

recorder is used as a CD-ROM drive.

15. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 14, wherein the second loop further freezes an instantaneous speed in the event of error wherein the speed processor registers an absence of the data frequency signal and outputs the determined rotation speed value which was stored previous to the occurrence of the error to control the disc actuator until the pick-up scans readable data and the data frequency signal is generated again.

16. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 15, wherein the second loop further generates a speed profile in case of jumps or smooth acceleration when the data is read in the first mode and the pick-up is moved towards a periphery of the disc in a so-called jump, thus, the speed processor anticipates a final rotation velocity required to read the data on an accessed track and outputs the final rotation velocity as the determined rotation speed value to the first loop during the jump while no data is read.

17. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 16, wherein:

the speed servo generates a smooth acceleration of the determined rotation speed value by successively outputting increasing speed values to the first loop so that when the disc rotates at higher speeds, the data may be read at a higher rate.

18. (CURRENTLY AMENDED) Disc speed control device ~~Optical disc player or recorder~~ according to claim 13, wherein the second loop comprises:

a data phase locked loop which receives the output signal from the pick-up, the data phase locked loop comprising:

means for generating a voltage depending on a frequency of a read data rate which is defined as a phase locked loop frequency,

a voltage curve having a correspondence between phase locked loop frequencies and said voltage, and

an output of said voltage according to said voltage curve; and

said speed processing means which receives at its input said output by the data phase locked loop and a reference voltage both of which are compared and, depending on a result of the comparison, outputs a higher or smaller determined rotation speed value.
